

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: D. James Surmeier, et al.

Serial No.:

10/761,557

Group No.: 1645

Filed:

01/21/04

Examiner:

Entitled: Manipulation of Neuronal Ion Channels

# INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

CERTIFICATE OF MAILING UNDER 37 CFR § 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on November 2), 2007.

By:

Mary Ellen Waite

Sir or Madam:

Enclosed please find an Information Disclosure Statement and Form PTO-1449, including copies of the references contained thereon, for filing in the U.S. Patent and Trademark Office.

A check for \$180.00 is also enclosed pursuant to 37 C.F.R. § 1.17(p) for filing this Information Disclosure Statement after three months as set forth in C.F.R. § 1.97(c).

The Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. 08-1290. An originally executed duplicate of this transmittal is enclosed for this

purpose.

Dated: November 21, 2005

11/25/2005\CNGUYEN 00000023 10761557

01 FC:1806 180.00 OP Tanya A. Arenson Registration No. 47,391

MEDLEN & CARROLL, LLP 101 Howard Street, Suite 305 San Francisco, California 94105

608/218-6900



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: D. James Surmeier, et al.

Serial No.:

10/761,557

Group No.: 1645

Filed:

01/21/04

Examiner:

Entitled:

Manipulation of Neuronal Ion Channels

## INFORMATION DISCLOSURE STATEMENT

10

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

CERTIFICATE OF MAILING UNDER 37 C.F.R. [] 1.8(a)(1)(i)(A)
I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, WA 22373-1450.  Date: November 21, 2005  By: Mary Ellen Waite

15

20

### Sir or Madam:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

- Rudy, B. & McBain, C. J. Kv3 channels: voltage-gated channels designed for high-frequency repetitive firing. TINS 24, 517-26 (2001).
- Coetzee, W. A. et al. Molecular diversity of K+ channels. Ann N Y Acad Sci 868, 25 233-85 (1999).
  - Brew, H. M. & Forsythe, I. D. Two voltage-dependent K+ conductances with complementary functions in postsynaptic integration at a central auditory synapse. J Neurosci 15, 8011-22 (1995).
- Du, J., Zhang, L., Weiser, M., Rudy, B. & McBain, C. J. Developmental 30 expression and functional characterization of the potassium-channel subunit

- Kv3.1b in parvalbumin-containing interneurons of the rat hippocampus. J Neurosci 16, 506-18 (1996).
- Lenz, S., Perney, T. M., Qin, Y., Robbins, E. & Chesselet, M. F. GABA-ergic interneurons of the striatum express the Shaw-like potassium channel Kv3.1. *Synapse* 18, 55-66 (1994).
- Weiser, M. et al. Differential expression of Shaw-related K+ channels in the rat central nervous system. *J Neurosci* 14, 949-72 (1994).
- Weiser, M. et al., *J Neurosci* **15**, 4298-314 (1995).

5

10

- Martina, M., Schultz, J. H., Ehmke, H., Monyer, H. & Jonas, P., *J Neurosci* 18, 8111-25 (1998).
- Baranauskas, G., Tkatch, T. & Surmeier, D. J. J Neurosci 19, 6394-404 (1999).
- Erisir, A., Lau, D., Rudy, B. & Leonard, C. S., J Neurophysiol 82, 2476-89
   (1999).
- Wigmore, M. A. & Lacey, M. G., J Physiol **527 Pt 3**, 493-506 (2000).
- Schroter, K. H. et al., FEBS Lett 278, 211-6 (1991).
  - Rettig, J. et al., *Embo J* 11, 2473-86 (1992).
  - Diochot, S., Schweitz, H., Beress, L. & Lazdunski, M., J Biol Chem 273, 6744-9
     (1998).
  - Thompson, S., J Gen Physiol 80, 1-18 (1982).
- 20 Song, W. J. et al., J Neurosci 18, 3124-37 (1998).
  - Kofuji, P., Davidson, N. & Lester, H. A., Proc Natl Acad Sci USA 92, 6542-6 (1995).
  - Sheng, M., Liao, Y. J., Jan, Y. N. & Jan, L. Y., Nature 365, 72-5 (1993).
  - Wang, H. S. et al., *Science* **282**, 1890-3 (1998).
- Abbott, G. W. et al., Cell 104, 217-31 (2001).
  - Macica, C. M. & Kaczmarek, L. K., J Neurosci 21, 1160-8 (2001).
  - Murakoshi, H., Shi, G., Scannevin, R. H. & Trimmer, J. S., Mol Pharmacol 52, 821-8 (1997).
  - Rettig, J. et al., *Nature* **369**, 289-94 (1994).

- Surmeier, D. J., Bargas, J., Hemmings, H. C., Jr., Nairn, A. C. & Greengard, P.,
   Neuron 14, 385-97 (1995).
- Hamill, O. P., Marty, A., Neher, E., Sakmann, B. & Sigworth, F. J., *Pflugers Arch* 391, 85-100 (1981).
- Yan, Z. & Surmeier, D. J., J Neurosci 16, 2592-604 (1996).
  - Tkatch, T., Baranauskas, G. & Surmeier, D. J., Neuroreport 9, 1935-9 (1998).
  - Rhodes, K. J. et al., J Neurosci 17, 8246-58 (1997).

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art.

15 Dated: November 21, 2005

5

20

Tanya A. Arenson Registration No. 47,391

MEDLEN & CARROLL, LLP 101 Howard Street, Suite 305 San Francisco, California 94105

PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO			Complete if Known		
<u></u>			Application Number	10/761,557	
<b>N</b> FORMA	TION DIS	CLOSURE	Filing Date	01/21/04	
∮ Ş,†ATEME	STATEMENT BY APPLICANT (Use as many sheets as necessary)		First Named Inventor	D. James Surmeier, e	
			Art Unit	1635	
(Use as many sneets as necessary)		Examiner Name	Chong		
Sheet 1	of	3	Attorney Docket Number	NWESTERN-08739	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	1	Rudy, B. & McBain, C. J. TINS 24, 517-26 (2001).	
	2	Coetzee, W. A. et al., Ann N Y Acad Sci 868, 233-85 (1999).	
	3	Brew, H. M. & Forsythe, I. D. J Neurosci 15, 8011-22 (1995)	
	4	Du, J., Zhang, L., Weiser, M., Rudy, B. & McBain, C. J., Neurosci 16, 506-18 (1996).	
	5	Lenz, S., Perney, T. M., Qin, Y., Robbins, E. & Chesselet, M. F., Synapse 18, 55-66 (1994).	
	6	Weiser, M. et al., J Neurosci 14, 949-72 (1994).	
	7	Weiser, M. et al., J Neurosci 15, 4298-314 (1995).	
	8	Martina, M., Schultz, J. H., Ehmke, H., Monyer, H. & Jonas, P., J Neurosci 18, 8111-25 (1998).	
	9	Baranauskas, G., Tkatch, T. & Surmeier, D. J., J Neurosci 19, 6394-404 (1999).	
	10	Erisir, A., Lau, D., Rudy, B. & Leonard, C. S., J Neurophysiol 82, 2476-89 (1999).	

	<del>, </del>	
Examiner	Date	
Signature	 Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO	Complete if Known		
Substitute for form 1449/PTO	Application Number	10/761,557	
INFORMATION DISCLOSURE	Filing Date	01/21/04	
STATEMENT BY APPLICANT	First Named Inventor	D. James Surmeier, e	
<i>(</i> 11	Art Unit	1635	
(Use as many sheets as necessary)	Examiner Name	Chong	
Sheet 2 of 3	Attorney Docket Number	NWESTERN-08739	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	11	Wigmore, M. A. & Lacey, M. G., J Physiol 527 Pt 3, 493-506 (2000).	
	12	Schroter, K. H. et al., FEBS Lett 278, 211-6 (1991).	
,	13	Rettig, J. et al., Embo J 11, 2473-86 (1992).	
	14	Diochot, S., Schweitz, H., Beress, L. & Lazdunski, M., J Biol Chem 273, 6744-9 (1998).	
	15	Thompson, S., J Gen Physiol 80, 1-18 (1982).	
	16	Song, W. J. et al., J Neurosci 18, 3124-37 (1998).	
	17	Kofuji, P., Davidson, N. & Lester, H. A., Proc Natl Acad Sci U S A 92, 6542-6 (1995).	
	18	Sheng, M., Liao, Y. J., Jan, Y. N. & Jan, L. Y., Nature 365, 72-5 (1993).	
	19	Wang, H. S. et al., Science 282, 1890-3 (1998).	
	20	Abbott, G. W. et al., Cell 104, 217-31 (2001).	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08B (08-03) Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Panerwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				Complete if Known		
Substitu	te for form 1449/P1O			Application Number	10/761,557	
INF	ORMATIO	N DIS	CLOSURE	Filing Date	01/21/04	
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	D. James Surmeier, e	
				Art Unit	1635	
(Use as many sheets as necessary)			iecessary)	Examiner Name	Chong	
Sheet	3	of	3	Attorney Docket Number	NWESTERN-08739	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	21	Macica, C. M. & Kaczmarek, L. K., J Neurosci 21, 1160-8 (2001).	
	22	Murakoshi, H., Shi, G., Scannevin, R. H. & Trimmer, J. S., Mol Pharmacol 52, 821-8 (1997).	
- "	23	Rettig, J. et al., Nature 369, 289-94 (1994).	i
	24	Surmeier, D. J., Bargas, J., Hemmings, H. C., Jr., Nairn, A. C. & Greengard, P., Neuron 14, 385-97 (1995).	
	25	Hamill, O. P., Marty, A., Neher, E., Sakmann, B. & Sigworth, F. J., Pflugers Arch 391, 85-100 (1981).	
	26	Yan, Z. & Surmeier, D. J., J Neurosci 16, 2592-604 (1996).	
	27	Tkatch, T., Baranauskas, G. & Surmeier, D. J., Neuroreport 9, 1935-9 (1998).	
	28	Rhodes, K. J. et al., J Neurosci 17, 8246-58 (1997).	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.